

WELDING PROCEDURE SPECIFICATION

WPS- 2010-110A **REV. NO.:** 0 **DATE:** 9/1/2004 ****APPLICABILITY****

WELDING PROCESS/ES GTAW-A and GTAW-A ASME: Y AWS: N

SUPPORTING PQ 200-110A OTHER: N/

JOINT This WPS shall be used in conjunction with the General Welding Standards (GWS) and Welding Fabrication Procedure (WFP) sections and criteria for joint details, repairs, NDE, inspection etc.

Weld Joint Type Butt/Fillet Class: Full or Partial Penetration

See GWS 1-06 for details Preparation: Mechanical

Root Opening: Backing: Argon

Backgrind root: N Backing Mat.:

Bkgrd Method: GTAW Flux: Backing Retainer:

FILLER METALS: Class: N/A and

A No: 0 **SFA Class:** 0. **and** 0. **F No:** 0 **and** 0 **Size:** 0/00 0/00 0/00

Insert: N Insert Desc.: N/A Weld Metal Thickness Range:
Flux: Type: NA Size: 0 AWS: 0.000 thru 0.000

Flux: Type: NA Size: 0 AWS: 0.000 thru 0.000 Filler Metal Note: Autonomous ASME: 0.035 thru 0.070

BASE MATERIAL P No. 110 Gr No. 0 to: P No. 110 Gr No. 0

Spec. ASTM B-165 Grade: All to: Spec. ASTM B-165 Grade: All

Pipe Dia Range: Groove > 0.25

Thickness Range: Groove: AWS: 0.000 thru 0.000 ASME: 0.035 thru 0.070

QUALIFIED POSITIONS All **Vertical Progression: AUTO** Preheat Min. Temp.: 50 **F GAS: Shielding:** Argon \mathbf{or} **Gas Composition: %** 0 **%** 0 Interpass Max. Temp. 350 **F** 100 % **Preheat Maintinance:** 50 **F** Gas Flow Rate cfh 5 **to** 15 **Backing Gas/Comp:** % PWHT: Time @ F Temp. **Backing Gas Flow cfh** 1 **to** F Trailing Gas/Comp: N/A % Temp. Range: to

PREPARED BY Kelly Bingham DATE: 3/30/2004

Signature on file at FWO-DECS

APPROVED BY Tobin Oruch **DATE:** 9/1/2004

Signature on file at FWO-DECS

Note:For SC/SS/ML-1/ML-2 work, this WPS requires independent review.

WPS NO: 2010-110A

WELDING CHARACTERISTICS:

Current: DCEN and DCEN Tungsten type: EWTH-2 Transfer Mode: N/A

Ranges: Amps 18 to 22 Pulsing Cycle: 45 to 50

Volts 5 to 8 Background Current: 10

Fuel Gas: N/A Flame: N/A Braze temp. F to

WELDING TECHNIQUE: For cleaning, grinding, and inspection criteria refer to Volume 2, Welding

Fabrication Procedures

Technique: Automatic **Cleaning Method:** Wire Brush, File, Grind

Single Pass of Multi Pass: S tringer or Weave bead (S/W): S Oscillation: N

GMAW Gun Angle $^{\circ}$: 0 to 0 Forehand or Backhand for GMAW (F/B): N/A

Maximum K/J Heat Input 97200 Travel speed/ipm: 28 - 35 Gas Cup Size:

PROCEDURE QUALIFIED FOR:

Charpy "V" Notch: N Nil-Ductil Transition Temperature: N Dynamic Tear: N

Comments:

Weld Layer	Manual Process	Filler Metals	Size	Amp Range		Volt Range		Travel ipm		Nozzel Angle	Other
1	GTAW-AT	N/A	0/00	18	22	5	8	28	35	0	
2	GTAW-AT		0/00	18	22	5	8	0	35	0	
3			0/00							v	
4			0/00								
5											
6											
7											
8											

REM. * Weld layers are representative only - actual number of passes and layer sequence may vary due to variations in joint design, thickness and fitup.